Safe Packaging

The total amount of LLRW generated from decommissioning will be relatively small – roughly 1 - 2 truckloads per week during a peak two-year period, beginning in early 2003.

Safe Packaging for Transportation and Disposal

Waste generated from decommissioning the Reactor Facility is dry, solid, low-level radioactive waste (LLRW) - much of it consisting of concrete rubble, metal debris and dirt containing very, very low levels of radioactivity. It is not spent nuclear fuel or high-level radioactive waste. LLRW is classified for purposes of both transportation and disposal and is strictly regulated.

U.S. Nuclear Regulatory Commission (NRC)

The NRC has three classifications for disposal of solid LLRW. This classification is based on the longest-lived isotopes present and how easily they can migrate.

CLASSIFICATIONS FOR DISPOSAL

- **CLASS A** extremely low levels of LLRW
- **CLASS B** higher levels of LLRW
- **CLASS C** highest levels of LLRW allowed in a LLRW disposal facility

U.S. Department of Transportation (DOT)

The DOT has three classifications for shipping solid LLRW. The classification is based on the amount of radioactivity in a container. To be protective of human health and the environment, the type of shipping container used depends on the type and amount of specific isotopes present in the waste.

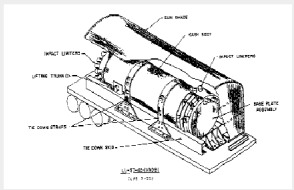
CLASSIFICATIONS FOR SHIPPING

- **Low Specific Activity (LSA)**
- **Type A**
- **Type B**

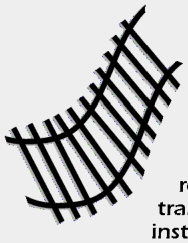
TYPE A
packages are designed to retain their contents under normal conditions of transport such as vibration, heavy rain and pressure from stacking.

TYPE B
packages are designed to protect and retain their contents under both normal and severe accident conditions and are certified by the NRC before use and are re-certified every 5 years.

Most of the waste from decommissioning has very low levels of radioactivity and will be shipped under the LSA classification in "strong, tight containers" such as steel drums, "SeaLand" containers (metal structures premounted on trucks) and B-25 boxes.



Example of Type B cask



Cask/Liner Transfer System

Waste from segmentation of the reactor internals and vessel will be placed in cylindrical steel liners (roughly 5 feet in diameter and six feet tall) to meet disposal regulations, and then placed in Type B containers called casks to comply with transportation regulations. A cask/liner transfer system (similar to a trolley track) is being installed to move the very heavy casks and liners into and out of the containment vessel.

1. A liner wrapped in plastic to protect from contamination, will be lifted by crane and rolled into the containment vessel via the cask/liner transfer system.
2. The liner will be lowered by crane into a reactor quadrant where it will be filled, sealed and stored there.
3. When a cask arrives at the Reactor Facility, it will be rolled into the containment vessel via the cask/liner transfer system.
4. The liner will be lifted by crane, the plastic will be removed and the liner will be placed into the cask.
5. The cask will be sealed, surveyed and rolled out of the containment vessel and lifted by crane onto a "low boy" truck for shipping.
6. Everything will be surveyed again before the truck leaves the site.